

## ADDENDUM NO. 2

### Demolition for Future Lincoln Entertainment Center City of Lincoln Lincoln, Nebraska

PROJECT: SPECIFICATION NO. 03-158  
REGA NO. 031001

LOCATION: Lincoln, Nebraska

ADDRESS: Block 41  
Downtown Lincoln

DATE OF ADVERTISEMENT: June 4, 2003

DATE OF ISSUE: July 2, 2003

DATE OF BID OPENING: Original: June 25, 2003  
Revised: July 9, 2003

NOTE TO ALL PLAN HOLDERS: Please insert this Addendum into your copy of the contract documents for the above named project.

The following changes to the contract documents are issued by the Architect/Engineer, shall be attached and made a part of the plans and specifications and shall have the same force and effect as though a part of the original issue. All other stipulations and requirements of the plans and specifications remain in effect.

#### **CHANGES TO THE PROPOSAL FORMS:**

Delete: Proposal Form in its entirety

Add: Revised Proposal Form, Exhibit A

Clarification: 5% Bid Bond required as identified on Revised Proposal Form

#### **CHANGES TO THE SPECIFICATIONS:**

##### **SECTION 1000 – ADMINISTRATIVE PROVISIONS**

##### **WORK ON WEEKENDS AND HOLIDAYS**

**ADD: Page 2, Line 9.** For all University of Nebraska home football game days, the CONTRACTOR will not be permitted to conduct any demolition or construction activity outside of buildings or any off-site hauling beginning at 12:00 NOON the day prior to the home game being played. Demolition may resume at 6:00 AM the day following the game. The tentative 2003 UNL home football schedule is as follows: August 30, September 6 and 13<sup>th</sup>, October 4, 18 and 25<sup>th</sup> and November 15<sup>th</sup>. It will be the CONTRACTOR'S responsibility to monitor any UNL home football game schedule changes.

##### **PERMITS, FEES AND NOTICES**

Delete: Page 3, Line 17. NESHA Forms

Add: Page 3, Line 17. NESHAP Forms

**Add: Page 3, Line 18. Nebraska Department of Roads Permit ( Requires a \$500 Performance Bond )**

#### PROJECT SCHEDULE

Delete: Page 3, Lines 40-42. In it's entirety.

**Add: Page 3, Lines 40-42, The Contractor shall indicate on his bid form the completion date of his project. The contractor shall assume the available start date shall be July 16, 2003. In any case, the Contractor shall be substantially complete by October 7, 2003 and fully completed by October 17, 2003.**

#### LIQUIDATED DAMAGES

Delete: Section B, in its entirety as set forth in the General Conditions, Article XLV.

**Add: Section B to the General Conditions, Article XLV Liquidated Damages as follows: Daily amount of the Liquidated Damages shall be \$1,000/day.**

#### PAYMENTS AND COMPLETION

**Add: Paragraph C to the General Conditions, Article XLVI Contract Sum as follows: The Contractor upon full completion of this contract and acceptance by the City of Lincoln shall be eligible to receive early completion bonus of \$1,000/day.**

#### SECTION 2100 – SITE PREPARATION

##### PAVEMENT REMOVAL

Delete: Page 2, Lines 19-22. In it's entirety.

**Add: Page 2, Lines 19-22. Remove brick sidewalk as indicated in the plans and in a uniform pattern. Whole bricks shall be stacked on wooden pallets, secured and delivered to the City of Lincoln Yard at 3200 Baldwin Street. Broken bricks or brick pieces will not be salvaged, and shall become the property of the Contractor.**

##### SIDEWALK CLOSURE

**Add: Page 2, Line 42, CONTRACTOR will be required to open and maintain an 8 foot wide sidewalk to pedestrian traffic and clean all debris from sidewalks along "O" Street, 11<sup>th</sup> Street and 12<sup>th</sup> Street beginning at 12:00 NOON the day prior to a University of Nebraska home football game being played. No demolition may occur which will impair passage along the sidewalk or risk the safety of the pedestrian traffic. The "P" Street sidewalk will remain closed throughout the demolition project and not reopened during game days. The sidewalks may be closed and outside demolition resume at 6:00 AM the day following the game. The tentative 2003 UNL home football schedule is as follows: August 30<sup>th</sup>, September 6<sup>th</sup> and 13<sup>th</sup>, October 4<sup>th</sup>, 18<sup>th</sup> and 25<sup>th</sup> and November 15<sup>th</sup>. It will be the CONTRACTOR'S responsibility to monitor any UNL home football game schedule changes.**

## REMOVAL OF EXISTING STRUCTURES

Delete: Page 3, Lines 14-18. In it's entirety.

**Add; Page 3, Lines 14-18. Remove structures as shown on the plans regardless of materials of which they are constructed. Removal shall include subsurface structures, including foundations and footings, removal and abandonment of water and gas line taps, furnishings, debris, sidewalks as shown on the plans, utility plumbing and plumbing fixtures, all electrical fixtures and conduits, steel, cast iron, concrete, interior rubbish, junk, wood, PCB and Mercury containing materials identified in Appendix B, including footings and pile caps in their entirety and all miscellaneous items. All other environmental issues encountered during the demolition process shall be handled on a case by case basis and be considered a change order to the construction contract. When removing concrete slabs, foundations, footings, walls, piers, etc., the removal shall be complete. Do not leave pieces or portions of these structures in place unless otherwise indicated on the drawings. If piles are encountered, cut pile 12" below pile cap. Remove pile cap and abandon pile in place. Contractor shall disconnect all utilities as per local governing requirements and specifications. Removal of are considered incidental to this pay item.**

## SECTION 2120 - DEMOLITION

### ENVIRONMENTAL ABATEMENT

Delete: Page2, Line 2. (NESHA)

**Add: Page 2, Line 2. (NESHAP)**

### SUBMITTALS

Delete: Page 2, Line 17. NESHA Form ( For Environmental Abatement Verification )

**Add: Page 2, Line 17. NESHAP Form ( For Environmental Abatement Verification )**

**Add: Page 2, Line 18. Nebraska Department of Roads Permit (Requires a \$500 Performance Bond )**

## PART III EXECUTION

Delete: Page 2, Lines 26-35. In its entirety.

**Add: Page 2, Lines 26- 35. REMOVE BUILDINGS AND STRUCTURES as shown on the plans regardless of materials of which they are constructed. Removal shall include subsurface structures, including foundations and footings, removal and abandonment of water and gas line taps, furnishings, debris, sidewalks as shown on the plans, utility plumbing and plumbing fixtures, all electrical fixtures and conduits, steel, cast iron, concrete, interior rubbish, junk, wood, PCB and Mercury containing materials identified in Appendix B, including footings and pile caps in their entirety and all miscellaneous items. All other environmental issues encountered during the demolition process shall be handled on a case by case basis and be considered a change order to the construction contract. When removing concrete slabs, foundations, footings, walls, piers, etc., the**

removal shall be complete. Do not leave pieces or portions of these structures in place unless otherwise indicated on the drawings. If piles are encountered, cut pile 12" below pile cap. Remove pile cap and abandon pile in place. Contractor shall disconnect all utilities as per local governing requirements and specifications. Removal of subsurface structures, including foundations and footings, removal of pavement, excavation, removal and abandonment of water and gas line taps, backfilling and installing new pavement are considered incidental to this pay item.

Add: Page 2, Line 48. REPOINTING AND CLEANING, The demolition contractor shall exercise care when removing framing associated with the floors and the roof structure of the Stephenson School Supply building ( west wall of building A ), framing into the masonry wall to remain. The demolition contractor is responsible for filling in all abandoned beam and joists pockets, and any other penetrations that may exist. The common wall is to be repointed and cleaned beginning approximately 1 foot above the Stephenson School Supply building roof line, down to an elevation of 26 feet above sidewalk level, and the length of the building. The approximate area to be repointed and cleaned is 22ft x 143ft or approximately 3,146 sq ft. The wall shall the same general appearance and cleanliness as the wall above the current roof line of the Stephenson School Supply building. Repointing and cleaning of this wall including all equipment and materials are considered incidental to pay item "REMOVE BUILDINGS AND STRUCTURES".

#### PART IV – MEASUREMENT AND PAYMENT

Delete; Page 3, Lines 21-32. In it's entirety.

Add: Page 3, Lines 21-32. REMOVE BUILDINGS AND STRUCTURES as shown on the plans regardless of materials of which they are constructed. Removal shall include subsurface structures, including foundations and footings, removal and abandonment of water and gas line taps, furnishings, debris, sidewalks as shown on the plans, utility plumbing and plumbing fixtures, all electrical fixtures and conduits, steel, cast iron, concrete, interior rubbish, junk, wood, PCB and Mercury containing materials identified in Appendix B, including footings and pile caps in their entirety and all miscellaneous items. All other environmental issues encountered during the demolition process shall be handled on a case by case basis and be considered a change order to the construction contract. When removing concrete slabs, foundations, footings, walls, piers, etc., the removal shall be complete. Do not leave pieces or portions of these structures in place unless otherwise indicated on the drawings. If piles are encountered, cut pile 12" below pile cap. Remove pile cap and abandon pile in place. Contractor shall disconnect all utilities as per local governing requirements and specifications. Removal of subsurface structures, including foundations and footings, removal of pavement, excavation, removal and abandonment of water and gas line taps, backfilling and installing new pavement are considered incidental to this pay item. Payment shall be made at the contract unit price per lump sum for "REMOVE BUILDINGS AND STRUCTURES".

Delete: Page 5, Lines 41-45. In it's entirety.

Add: Page 5, Lines 41-45. REMOVE BRICK SIDEWALK shall include all equipment, materials and labor necessary to remove all brick sidewalks as indicated in the plans and in a uniform pattern. Whole bricks shall be stacked on wooden pallets, secured and delivered to the City of Lincoln Yard at 3200 Baldwin Street. Broken bricks or brick pieces will not be salvaged, and shall become the property of the Contractor. Loading, hauling and unloading shall be considered incidental to this pay item. Payment shall be made at the Contract unit price per square foot for "REMOVE BRICK

**SIDEWALK”.**

**SECTION 2200 – SITE EARTHWORK**

Delete: SECTION 2200 – SITE EARTHWORK. In its entirety.

**Add: Exhibit G, SECTION 2200 – SITE EARTHWORK**

**APPENDIX**

**Add: Exhibit B, Appendix B; PCB and Mercury Containing Materials**

**CHANGES TO PLAN SHEETS**

SHEET C-7, SITE FINISH CROSS SECTIONS

Delete: Section A-A

**Add: Exhibit C, Section A-A**

**Add: Title to untitled cross section. Section C-C**

SHEET C-1, GENERAL NOTES

Delete: Projected Project Phasing

**Add: Exhibit D, Projected Project Phasing**

SHEET C-6, MISCELLANEOUS DETAILS

**Add: Exhibit E, Typical Pavement Replacement for Utility Abandonment's**

SHEET C-8, PHOTOS/ADDITIONAL INFORMATION

**Add: Exhibit F, Information; West Common Wall, Building A**

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Respectfully Submitted,  
REGA ENGINEERING GROUP, INC

  
Dan J. Rosenthal, P.E.

**REVISED PER ADDENDUM NO. 2**  
**PROPOSAL**  
**DEMOLITION FOR**  
**FUTURE LINCOLN ENTERTAINMENT CENTER**  
**SPECIFICATION NO.03-158**

BID OPENING TIME: 12:00 NOON

DATE: Wednesday, July 9, 2003

The undersigned bidder, having full knowledge of the requirements of the City of Lincoln for the below listed items and the contract documents (which include Notice to Bidders, Instructions to Bidders, this Proposal, Specifications, Contract, and any and all addenda) and all other conditions of the Proposal, agrees to sell to the City the below listed items for the performance of this Specification, complete in every respect, in strict accordance with the contract documents at and for unit prices listed below.

**ADDENDA RECEIPT:** The receipt of addenda to the specification numbers \_\_\_\_\_ through \_\_\_\_\_ are hereby acknowledged. Failure of any bidder to receive any addendum or interpretation of the specifications shall not relieve the bidder from any obligations specified in the bid request. All addenda shall become part of the final contract document.

Item #	Description	Qty.		Price	Total
001	MOBILIZATION	1	@	( ) per LS	( )
002	TRAFFIC CONTROL	1	@	( ) per LS	( )
003	REMOVE BUILDINGS & STRUCTURES	1	@	( ) per LS	( )
004	REMOVE PAVEMENT	1	@	( ) per LS	( )
005	REMOVE SIDEWALK	1	@	( ) per LS	( )
006	REMOVE CURB	9	@	( ) per LF	( )
007	REMOVE BRICK SIDEWALK	1,157	@	( ) per sq. ft.	( )
008	REMOVE LIGHT POLE & LUMINAIRE	17	@	( ) per EA.	( )
009	ADJUST MANHOLE TO GRADE	2	@	( ) per EA.	( )
010	CRUSHED ROCK FOR SURFACING	168	@	( ) per ton	( )
011	EARTHWORK (IMPORTED & BACKFILL)	1	@	( ) per LS	( )
012	EARTHWORK (BURIED RUBBLE)	3963	@	( ) per Cu.Yd.	( )
013	CONSTRUCT 7" CONCRETE PAVEMENT	58	@	( ) per Sq.Yd.	( )
014	CONSTRUCT 4" ASPHALT PAVEMENT	101	@	( ) per Sq.Yd.	( )
015	CONSTRUCT 4" CONCRETE SIDEWALK	475	@	( ) per sq. ft.	( )
016	CONSTRUCT PIPE PLUG	10	@	( ) per EA.	( )
017	CONSTRUCT ASPHALT CURB	63	@	( ) per LF	( )
018	CONSTRUCT 6' CHAIN LINK FENCE	3,773	@	( ) per LF	( )
019	CONSTRUCT SILT FENCE	1,013	@	( ) per LF	( )
020	CONSTRUCT SHEET PILE	1	@	( ) per LS	( )
021	CONSTRUCT LIGHT POLE FOUNDATION	1	@	( ) per EA.	( )
022	REINSTALL LIGHT POLE & LUMINAIRE	4	@	( ) per EA.	( )
TOTAL				( )	( )

**AFFIRMATIVE ACTION PROGRAM:** Successful bidder will be required to comply with the provisions of the City's Affirmative Action Policy (Contract Compliance, Sec. 1.16). The Equal Opportunity Officer will determine compliance or non-compliance with the City's policy upon a complete and substantial review of successful bidder's equal opportunity policies, procedures and practices.

The undersigned signatory for the bidder represents and warrants that he has full and complete authority to submit this proposal to the City, and to enter into a contract if this proposal is accepted.

If You are a service provider you can guarantee that your service will be available and uninterrupted after December 31, 1999, and the deliverables will also be year 2000 compliant.

**Bid Security shall be 5% of Contractors Bid and shall meet requirements of "INTRODUCTION TO BIDDERS".**

**Exhibit A**

RETURN 2 COMPLETE COPIES OF PROPOSAL AND SUPPORTING MATERIAL.  
MARK OUTSIDE OF BID ENVELOPE AS FOLLOWS:  
SEALED BID FOR SPEC. 03-158

\_\_\_\_\_  
COMPANY NAME

\_\_\_\_\_  
BY (Signature)

\_\_\_\_\_  
STREET ADDRESS or P.O. BOX

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
CITY, STATE

\_\_\_\_\_  
ZIP CODE

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
TELEPHONE

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
EMPLOYER'S FEDERAL I.D. NO.  
OR SOCIAL SECURITY NUMBER

\_\_\_\_\_  
ESTIMATED COMPLETION DAYS

\_\_\_\_\_  
TERMS OF PAYMENT

BIDS MAY BE INSPECTED IN THE PURCHASING DIVISION OFFICES DURING NORMAL BUSINESS HOURS, AFTER TABULATION BY THE PURCHASING AGENT. IF YOU DESIRE A COPY OF THE BID TABULATION TO BE MAILED TO YOU, YOU MUST ENCLOSE A SELF-ADDRESSED STAMPED ENVELOPE WITH YOUR BIDDING DOCUMENTS. Bid tabulations can also be viewed on our website at: <http://www.ci.lincoln.ne.us/city/finance/purch/specindx.htm>.

EXHIBIT A

## NPDES CERTIFICATION STATEMENT

I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site as part of this certification. Further, by my signature, I understand that I am becoming a co-permittee, along with the owner(s) and other contractors and subcontractors signing such certifications, to the Nebraska Department of Environmental Quality NPDES General Permit NER100000 for "Notice of Intent (NOI) Requesting Discharge Authorization for Storm Water from Construction Sites" at the identified site. As a co-permittee, I understand that I, and my company, are legally required under the Clean Water Act and the Code of Nebraska, to ensure compliance with the terms and conditions of the storm water pollution prevention plan developed under this NPDES permit and the terms of this NPDES permit.

Project Name: \_\_\_\_\_

Project Address: \_\_\_\_\_

\_\_\_\_\_

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_.

\_\_\_\_\_  
(Authorized Signature and Title)

(Print or Type)

(Company Name)

(Address)

(Telephone Number)



## **BIDDER QUALIFICATION**

Bidder shall present within this proposal four successfully completed past projects with a final contract value equal to or more than \$500,000. Contractor shall furnish project description, year of completion, final contract value and a current project contact, address and phone number. The proposal shall be considered non-responsive if this information is not included.

### **COMPLETED PAST **FOUR** PROJECTS**

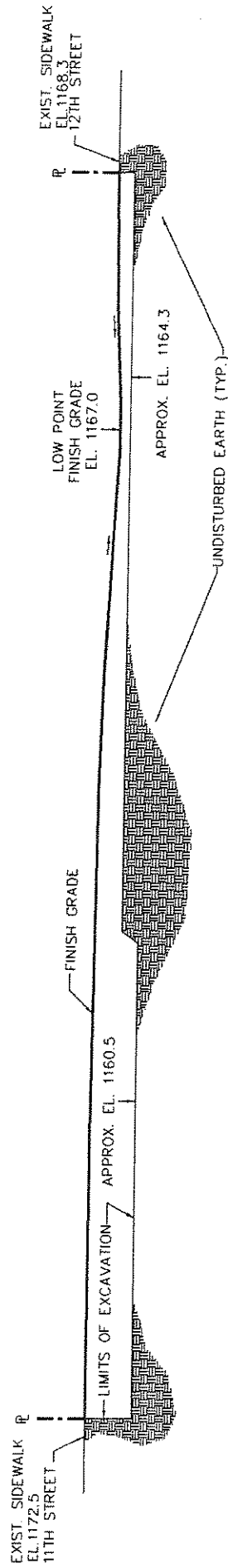
Project Description:_____	Project Description:_____
Project Location:_____	Project Location:_____
Project Contact:_____	Project Contact:_____
Address:_____	Address:_____
Phone Number:_____	Phone Number:_____
Project Start Date: _____	Project Start Date:_____
Project Completion Date:_____	Project Completion Date:_____
Final Contract Amount:_____	Final Contract Amount:_____
Project Description:_____	Project Description:_____
Project Location:_____	Project Location:_____
Project Contact:_____	Project Contact:_____
Address:_____	Address:_____
Phone Number:_____	Phone Number:_____
Project Start Date: _____	Project Start Date:_____
Project Completion Date:_____	Project Completion Date:_____
Final Contract Amount:_____	Final Contract Amount:_____

## APPENDIX B

PCB AND MERCURY CONTAINING MATERIALS			
Unit	Number of PCB Ballasts	Number of Mercury Tubes/Length Each	Number of Mercury Thermostats
A	35	440/4ft.	3
B	120	134/8ft., 80/4ft., 6/2ft.	2
C	115	240/ft., 200/4ft., 20/2ft.	0
D & E	245	82/8ft., 550/4ft., 25/2ft.	5
F	18	30/8ft., 20/4ft., 6/2ft.	2
G	0	130/4ft.	0
H	0	625/4ft., 90/2ft.	8

These quantities are for information only. It is the Contractors responsibility to verify the number of PCB Ballasts, Mercury Tubes and Mercury Thermostats, to the Contractors satisfaction.

Exhibit B

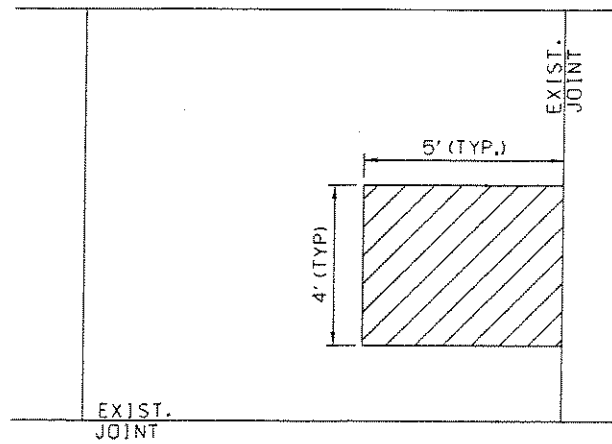


**SECTION A-A**  
 (SHEET C-7, SITE FINISH CROSS-SECTIONS)  
 HORIZ. SCALE: 1"=40'  
 VERT. SCALE: 1"=40'

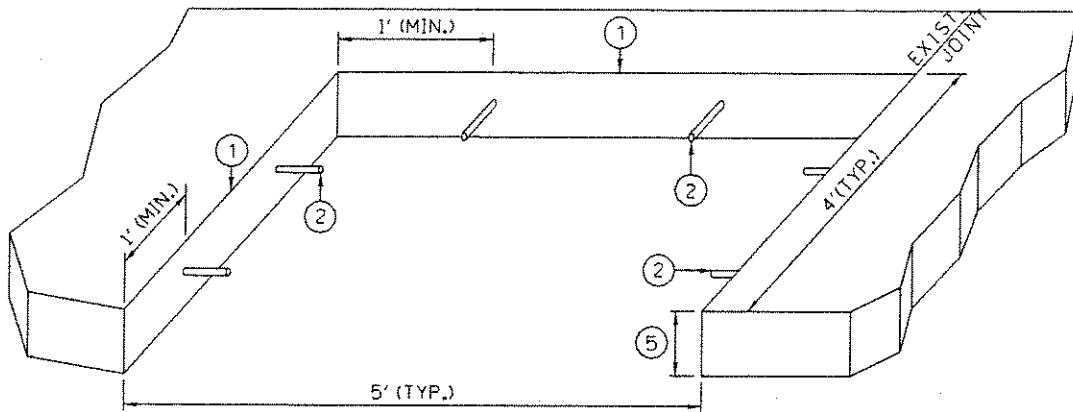
**PROJECTED PROJECT PHASING**

Unit	Address	Environmental Cleanup Completed by:	Available to Demolition Contractor	Demolition Completed and Backfilled by:
A	1112 O STREET	August 14, 2003	August 15, 2003	October 31, 2003
B	1118 O STREET	June 30, 2003	July 28, 2003	October 31, 2003
C	1124 O STREET	June 13, 2003	July 28, 2003	October 31, 2003
D	1132 O STREET	August 18, 2003	August 20, 2003	October 31, 2003
E	1134 O STREET	August 18, 2003	August 20, 2003	October 31, 2003
F	1125 P STREET	July 9, 2003	July 28, 2003	October 31, 2003
G	137 N. 12TH	August 18, 2003	August 20, 2003	October 31, 2003
H	144 N. 11TH	July 1, 2003	July 28, 2003	October 31, 2003
I	PARKING LOT	N/A	July 28, 2003	October 31, 2003
J	ALLEY	N/A	N/A	October 31, 2003
K	SIDEWALK	N/A	N/A	October 31, 2003

**Contractor shall provide a comprehensive demolition schedule at the Pre-Construction Meeting.**



PLAN



- ① FULL DEPTH DIAMOND SAWCUT
- ② INSTALL #5 X 18" DOWEL BARS ON ALL EDGES AT 30" CENTERS (MAX.) DRILL AND GROUT INTO EXISTING PAVEMENT
- ③ PAVEMENT REMOVAL SHALL BE PERFORMED ALONG LINES OF EXISTING JOINTS WHERE POSSIBLE.
- ④ ALL CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT STANDARD SPECIFICATIONS OF THE NEBRASKA DEPARTMENT OF ROADS FOR 47B CONCRETE.
- ⑤ THICKNESS OF NEW PAVEMENT SHALL BE THE SAME AS EXISTING PAVEMENT.

## TYPICAL PAVEMENT REPLACEMENT FOR UTILITY ABANDONMENTS

(NOT TO SCALE)

### EXHIBIT E

## Information; West Common Wall, Building A

This pertains to the demolition of buildings on the north side of the 1100 block of "O" Street. This is being provided as information only. Contractor shall confirm that conditions are as stated and maintain complete responsibility for proper demolition adjacent to the referenced wall. Any damages to the adjacent structure to remain, shall be the full responsibility of the Contractor.

### Addendum Item:

Question had been raised with regards to the demolition of the wall located between the Continental Commons Building and Stephenson's School Supply Building ( **shown as Building A on the Plans** ). Some investigation was performed by Hampton Commercial Construction to determine the thickness of the wall and whether or not two walls existed. The determination of this was to give the demolition contractor direction of what had to be removed, what had to remain, and whether or not some means of stabilization of the wall would be required.

Mark Heir of Hampton Commercial Construction drilled a hole through the wall at the third level to determine the wall's thickness and composition. The wall was determined to be a single wall consisting of 4 wythes of masonry that is 17 to 18 inches thick. The mortar was reported to be fairly soft.

Since the wall is a load bearing wall for the Continental Commons Building that is to remain, **it shall not be demolished**. The floors and the roof of the Continental Commons Building currently provide lateral stability for the floors and the roof above the Stephenson School Supply building. The floors of the Continental Commons building shall provide lateral stability of the wall below the Stephenson School Supply building roof line. Contractor shall reference REPOINTING AND CLEANING of the specifications.

The demolition contractor shall exercise care when removing framing associated with the floors and the roof structure of the Stephenson School Supply building framing into the masonry wall to remain. The demolition contractor is responsible for filling in all abandoned beam and joists pocket, and any other penetrations that may exist. The wall below the Stephenson School Supply building roof line and the length of the building **is to be repointed and cleaned**. The wall shall appear the same as the wall above the current roof line of the Stephenson School Supply building.

1 SECTION 2200 – SITE EARTHWORK

2  
3 PART 1 - GENERAL

4  
5 RELATED WORK SPECIFIED ELSEWHERE

6

7 Site Preparation	Section 2100
8 Clearing and Grubbing	Section 2110
9 Demolition	Section 2120

10

11 A copy of the Geotechnical report is available at Thiele Geotech, 13478 Chandler Road Omaha, NE 68137,  
12 (402) 556-2171 or at REGA Engineering Group, Inc. at 4000 Central Park Drive Suite 204 Lincoln, NE 68504,  
13 (402) 466-5000.

14  
15 Work covered under this section shall consist of the rough grading of the site to conform to the grades, lines  
16 and contours shown on the Drawings. The Work shall include all excavation, shaping and sloping of all cut  
17 areas and all placing, compacting, shaping and finishing of all fill in areas necessary for the completion of all  
18 site.

19  
20 JOB CONDITIONS

21  
22 Contractor shall take great care while removing the concrete paving in the alley due to the utilities located in  
23 the alley. Existing utilities, notably the Alltel fiber optic line, lie very shallow, and are to be protected in all  
24 events.

25  
26 Contractor shall carefully maintain all bench marks, monuments, stakes, and other reference points and  
27 replace same if disturbed or destroyed.

28  
29 Contractor shall exercise extreme care to protect all existing underground and overhead utilities. Contractor  
30 shall be responsible for repairing all utilities damaged or destroyed during construction.

31  
32 Contractor shall protect trees, shrubs, lawns, and other features which are to remain after construction is  
33 completed.

34  
35 Contractor shall protect structures which are to remain.

36  
37 DEFINITIONS

38  
39 Suitable materials include low plasticity material that is free of debris, roots, organic matter, frozen matter,  
40 and which is free of stones with any dimension greater than 3 inches of the specified loose layer thickness.

41 Unsuitable materials include all material that contains debris, roots, organic matter, frozen matter, stone  
42 (with any dimension greater than 3 inches, the loose layer thickness), or other materials that are determined  
43 by the Engineer or Testing Laboratory as too wet, having high plasticity, or otherwise unsuitable for  
44 providing a stable subgrade.

45  
46 Degree of compaction required is expressed as a percentage of the maximum dry density determined by  
47 ASTM D 698. Moisture content shall be adjusted to not more than one percent (1%) below or four percent  
48 (4%) above optimum moisture content.

49  
50 PART 2 - PRODUCTS

51  
52 MATERIALS

53  
54 All fill and backfill materials shall be select subsoil and shall be clean, inorganic, low plasticity lean clay or  
55 silt with a liquid limit less than 45 and plasticity index less than 20. Material shall be selected from off-site  
56 borrow areas as approved by the Engineer and Testing Laboratory. The Contractor shall furnish and haul  
57 off-site borrow material to the job site.

1 PART 3 - EXECUTION

2  
3 EQUIPMENT

4  
5 All equipment shall be adequate for the purpose for which it is to be used and shall be kept in satisfactory  
6 working order. Equipment shall be adequate to perform all stripping, excavation, hauling, placement of  
7 embankment, compaction, trimming, and shaping.

8  
9 EMBANKMENT

10  
11 Embankments shall be constructed of suitable material removed from excavation areas on the site.  
12 Unsuitable materials as defined above shall not be used.

13  
14 When embankments are constructed on sidehill slopes steeper than 4 to 1, the area of the original slope on  
15 which embankment is to be placed shall be stepped to a vertical depth of at least twelve inches (12") in order  
16 in integrate the embankment and the slope.

17  
18 Place all embankments to the grades, lines, and contours shown on the Drawings. Place embankment  
19 systematically, as early as possible, to allow maximum time for natural settlement. The hauling of  
20 embankment material shall be distributed over the entire embankment areas to assist in compacting the  
21 material.

22  
23 Do not place embankments over porous, wet, or spongy subgrade surfaces. If necessary, remove such  
24 unsuitable material and replace with satisfactory stabilizing materials, as directed by the Engineer.

25 Place material for embankments in successive horizontal layers not to exceed eight inches (8") of loose  
26 thickness for heavy equipment and four inches (4") of loose thickness for light equipment. Level and  
27 compact each layer to a uniform density of ninety-five percent (95%) of maximum density, as determined by  
28 ASTM D 698.

29  
30 All embankments shall be compacted in place to a tolerance of 0.2 feet from the lines, grades, and contours  
31 shown on the Drawings.

32  
33 EARTHWORK (IMPORTED AND BACKFILL) shall include all equipment, materials and labor  
34 necessary for the subgrade preparation, importing specified soils from off-site, moisture conditioning,  
35 placement and compaction to the specified requirements. Fine grade as necessary to meet the contours  
36 shown on the drawings. Pumping and maintenance of silt barrier are considered incidental for this pay  
37 item. Payment shall be made at the contract unit price per lump sum for "EARTHWORK  
38 (IMPORTED AND BACKFILL)".

39  
40 DEMOLITION EARTHWORK – BURIED RUBBLE shall include all equipment, materials and labor  
41 necessary for the excavation of buried rubble including but not limited to masonry, wood, metals,  
42 pipes, brick, plumbing, electrical fixtures, rubber tires and glass. This pay item shall include all  
43 equipment, materials and labor necessary for the subgrade preparation, importing specified soils from  
44 off-site, moisture conditioning, backfilling, placement and compaction to the specified requirements.  
45 No additional payment shall be made for imported soil quantities that exceed the exported debris  
46 removal. Fine grade as necessary to meet the contours shown on the drawings. Pumping and  
47 maintenance of silt barrier are considered incidental for this pay item. This pay item shall include the  
48 loading, hauling and unloading of excavated material to an approved landfill. Landfill fees are  
49 considered incidental to this pay item. Measurement shall be made per cubic yard as measured by  
50 truck loads of debris removal. Payment shall be made at the contract unit price per cubic yard for  
51 "DEMOLITION EARTHWORK – BURIED RUBBLE".

52  
53 COMPACTION

54  
55 Compaction of all excavation and embankment areas shall be to a uniform density of a minimum of ninety-  
56 five percent (95%) of maximum density, as determined by ASTM D 698. Moisture content shall be adjusted  
57 to not more than one percent (1%) below or four percent (4%) above optimum moisture content.



1 The Contractor shall be responsible for scheduling all compaction density testing. Density tests shall be  
2 performed by the Owner's Testing Laboratory. Tests shall be performed randomly, but in sufficient  
3 numbers to ensure that the specified density is being obtained for the Work. The specific locations of  
4 compaction density tests shall be determined by the Testing Laboratory. Copies of all testing reports shall be  
5 furnished to the Engineer in accordance with the General Requirements. Payment for failed tests shall be the  
6 sole responsibility of the Contractor. Payment for successful tests shall be made by the Owner.

7  
8 One (1) Test Per every other 8-inch Lift Per 20,000 S.F. of Embankment.  
9

10 The Contractor shall be responsible for the stability of all embankment and excavation areas and shall  
11 replace, at Contractor's own expense, any portions which become displaced or unstable prior to the  
12 expiration of the warranty period.  
13

#### 14 DRAINAGE

15  
16 Grade all excavation and embankment areas so that positive drainage exists during and after construction.  
17 Prevent the ponding of surface water unless specifically called for on the Drawings or directed by the  
18 Engineer.  
19  
20

21  
END OF SECTION